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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,642	10/17/2003	Joachim Fouret	103180-50408-122613	1962

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RESEARCH TRIANGLE PARK, NC 27709-3828

EXAMINER
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HAROLD, JEFFEREY F

ART UNIT	PAPER NUMBER
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2614

MAIL DATE	DELIVERY MODE
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05/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/688,642	<b>Applicant(s)</b> FOURET ET AL.	
	<b>Examiner</b> Jefferey F. Harold	<b>Art Unit</b> 2614	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12 and 14-18 is/are rejected.
- 7) ☐ Claim(s) 4 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-10, 12 and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahmadi et al. (United States Patent Application Publication 2002/0105942), hereinafter referenced as Ahmadi.

Regarding claim 1, Ahmadi discloses a dual tone multi frequency signal detector. In addition, Ahmadi discloses a method of detecting DTMF signals in a packetized linear voice signal, comprising the steps of: (a) filtering the packetized linear voice signal through a plurality of notch filters, each of said notch filters having a pair of notches at DTMF frequencies and each of said notch filters producing a filtered signal; (b) calculating an energy level for each of said filtered signals; (c) evaluating one or more criteria using said calculated energy levels; and (d) if said criteria are met, producing a DTMF indicator, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 2, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein the notch filters include sixteen parallel

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notch filters, each having a pair of notches centered at a pair of DTMF frequencies corresponding to a respective DTMF tone, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 3, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein the packetized linear voice signal and the filtered signals include frames, and wherein the step of calculating includes calculating said energy level over a selected frame of each of said filtered signals, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 5, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein the energy levels include a minimum energy level and a maximum energy level and wherein the step of evaluating includes determining whether the maximum energy level exceeds the minimum energy level by at least a predetermined threshold, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 6, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein said energy levels include a minimum energy level and a second-to-minimum energy level and wherein said step of evaluating includes determining whether said second-to-minimum energy level exceeds said minimum energy level by at least a predetermined threshold, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 7, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein the energy levels include a minimum

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energy level corresponding to said filtered signal produced by a first of said notch filters having notches at a first and second DTMF frequency, and wherein said step of evaluating includes determining whether said energy level for a second of said notch filters exceeds said energy level for a third of said notch filters by a predetermined threshold, wherein said second filter includes a notch at said first DTMF frequency and said third filter includes a notch at said second DTMF frequency, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 8, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein the energy levels include a minimum energy level corresponding to said filtered signal produced by a first of said notch filters having a notch at a first lower DTMF frequency, and wherein said step of evaluating includes determining whether said energy level for a second of said notch filters exceeds said energy level for a third of said notch filters by a predetermined threshold, wherein said second and third filters both include a notch at said first lower DTMF frequency, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 9, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein said energy levels include a minimum energy level corresponding to said filtered signal produced by a first of said notch filters having a notch at a first upper DTMF frequency, and wherein said step of evaluating includes determining whether said energy level for a second of said notch filters exceeds said energy level for a third of said notch filters by a predetermined threshold,

wherein said second and third filters both include a notch at said first upper DTMF frequency, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claim 10, Ahmadi discloses everything claimed as applied above (see claim 1), in addition, Ahmadi discloses wherein said step of filtering further includes filtering the packetized linear voice signal through a 1004 Hz notch filter having a notch at approximately 1004 Hz and producing a 1004 Hz filtered signal, wherein said step of calculating includes calculating a 1004 Hz energy level for said 1004 Hz filtered signal, and wherein said step of evaluating includes determining whether said 1004 Hz energy level exceeds a predetermined threshold, as disclosed at paragraph [0030] – paragraph [0039], and exhibited in figures 3-7.

Regarding claims 12 and 14-17, Ahmadi discloses everything claimed, therefore claims 12 and 14-17 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 1-3 and 5-10.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claim 11 and 18*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadi in view of well know prior art (MPEP 2144.03).

Regarding **claim 11**, Ahmadi disclose everything claimed, as applied above, (see claim 1), however, Ahmadi fails to disclose dial tone notch filter having a notch at 400Hz for determining the presence of a dial tone. However, the examiner takes official notice of the fact that it was well know in the art to provide a dial tone notch filter having a notch at 400Hz for determining the presence of a dial tone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ahmadi by specifically providing dial tone notch filter having a notch at 400Hz for determining the presence of a dial tone, for the purpose of determination of the availability of the PSTN.

Regarding claim 18, it is interpreted and thus rejected for the reasons set forth above in the rejection of claim 11.

#### ***Allowable Subject Matter***

Claims 4 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F. Harold whose telephone number is (571)272-7519. The examiner can normally be reached on 8AM - 4:30PM.

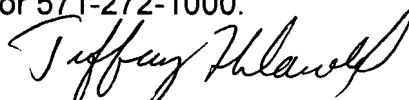
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (571)2727488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JFH  
April 30, 2007



Jefferey F Harold  
Primary Examiner  
Art Unit 2614